IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

INFINITY COMPUTER PRODUCTS INC., Plaintiff, v. TOSHIBA AMERICA BUSINESS SOLUTIONS, INC., Defendant.	:	Civil Action No.: 2:12-cv-06796-NIQA (LEAD CASE)

PLAINTIFF INFINITY COMPUTER PRODUCTS INC.'S
RESPONSIVE CLAIM CONSTRUCTION BRIEF

Table of Contents

Table of Authorities

Cases

Pursuant to the Court's Amended Scheduling Order of August 15, 2018 (Case No. 2:12-cv-06796-NIQA, Dkt. No. 110), Plaintiff Infinity Computer Products, Inc. ("Infinity" or "Plaintiff") hereby files this its Responsive Claim Construction Brief, and in support thereof, state as follows:

I. INTRODUCTION

Defendants begin their Opening Claim Construction Brief ("Opening Brief") with a request: that this Court construe the "terms of the Patents-in-Suit" as "limited in scope": essentially as set forth in the '558 parent patent claims which are unasserted in this case but against which Defendants would seemingly prefer to litigate. *See* Brief at 1-2.

In doing so, Defendants misstate the fundamentals of claim construction. Claims in each asserted patent set forth the "metes and bounds" of the claimed inventions. It is the claims that place the public on notice of the scope of the patentee's right to exclude. *See, e.g., Johnson & Johnston Assoc. Inc. v. R.E. Serv. Co.*, 285 F.3d 1046, 1052 (Fed. Cir. 2002) (en banc). A consistent theme throughout this process is that Defendants seek to import limitations from characterizations of specific examples in the specification to improperly narrow the scope of the claim terms. But, "the words of a claim 'are generally given their ordinary and customary meaning' ... that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips*, 415 F.3d at 1312–13 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). While claim terms are understood in light of the specification, a claim construction must not import limitations from the specification into the claims. *Id.* at 1323.

Although Defendants seek to confine terms to a particular embodiment, it is improper to do so; the claim language itself is paramount. *See, e.g., Innogenetics*, 512 F.3d at 1363, 1370.

Defendants' attempt to re-write the claim language by importing limitations from the specification is improper. *See Phillips*, 415 F.3d at 1323 (holding that while claim terms are understood in light of the specification, a claim construction must not import limitations from the specification into the claims).

A second recurring theme is Defendants' efforts to misapply the descriptor "generic" or "unmodified" from the context of the claims and seek to apply them to every component of hardware and software in the accused products. It is self-evident that Defendants have made changes to the software and hardware they sell since the inventions of the Patents-in-Suit were described in the mid-90s. But the inventions conceived and patented by Mr. Bruce Nachman continue to be used in the Defendants' devices decades later.

Finally, Defendants correctly point out that the Patents-in-Suit have been repeatedly examined by the United States Patent & Trademark Office. Their interpretation, however, is at odds with the historical facts. The dialogue with the Patent Office over the course of many years has resulted in substantial exposition as to the meaning of many of the claim phrases described below. Moreover, the Patents-in-Suit have been vetted to an extraordinary degree. As set forth in this memorandum, the statements made during the course of prosecution, both originally and during reexamination, support Infinity's proposed constructions.

II. BACKGROUND OF THE PATENTS-IN-SUIT

A. Technical Overview

Plaintiff has asserted that Defendants infringe multiple claims of U.S. Patent Nos. 6,894,811 (the "'811 patent"); 7,489,423 (the "'423 patent"); 8,040,574 (the "'574 patent"); and U.S. Patent No. 8,294,915 (the "'915 patent"). The '811, '423, '574, and '915 patents are collectively referred to as the "Patents-In-Suit."

The Patents-in-Suit teach an integrated system for communications between a facsimile machine and a PC in order to transfer scan and print data. This teaching corresponds to the primary features of modern fax-based multi-function printers, or "MFPs," also known as "All in One's."

Bruce Nachman's invention represented a pioneering breakthrough: he recognized that the consolidation of a facsimile machine with scan and printing capability using generic communication protocols was possible, thereby obviating the need for many separate devices. providing a bidirectional direct connection, for scan or print data flow, via a passive digital link between a facsimile machine and a PC. When in this mode the data flow bypasses or is isolated from the telephone line. At the time of the invention, most PCs were typically delivered with installed Windows or Apple operating system send receive generic communication software. Optionally, this generic software could be added to the PCs. The '558 Patent specification teaches using a group 1, 2, or 3 facsimile machine and analog and/or digital transmission for sending scan or print data between the facsimile machine and the PC. This method was made possible through the realization that standard fax machines based on emerging digital facsimile transmission standards could share data formats common to the data communications employed by personal computers. Accordingly, the invention adopts generic communications protocols between the facsimile machine and the computer for the transfer of data for the purposes of printing and scanning with the facsimile machine.

Prior to the Nachman invention, all prior art did not recognize use of the native digital data and subsequently did not employ generic transmission schema for transfer of the digital data for the purposes of printing or scanning.

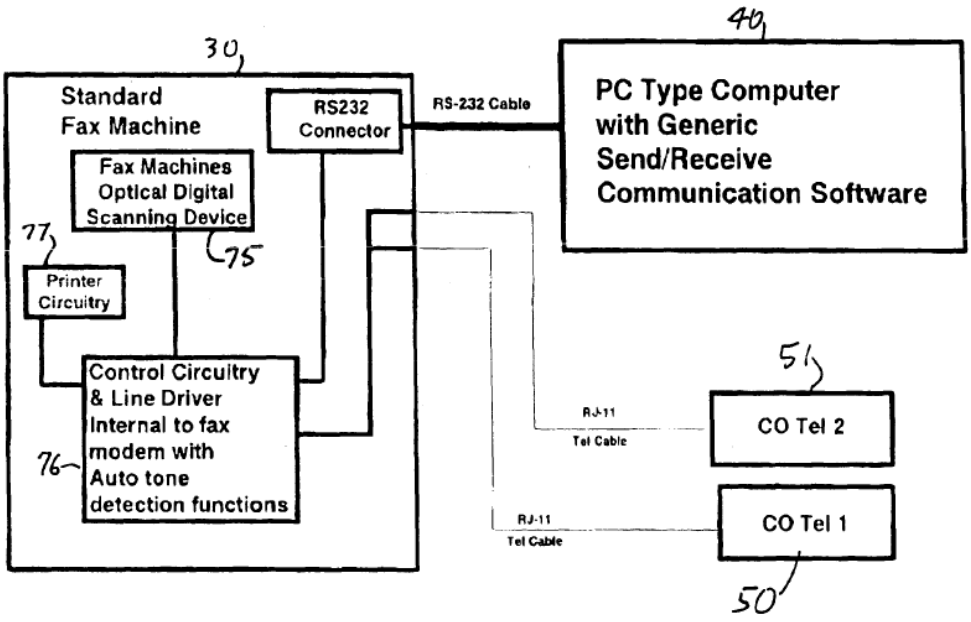


Fig. 2g

In particular, as shown in the ’811 patent in Fig. 2g, a Group 3 facsimile machine is connected via a bidirectional RS 232 digital passive link for transmission of scan and print data with a PC using generic send receive communication software, which is representative of a typical MFP today.

The’558 Patent specification teaches the use of digital connectivity with Group 3 facsimile machines, and PCs, in accordance with ITU recommendations T.4, T.6 and T.30. This is further substantiated in Dr. Marc Levitt’s Declaration, attached.

Group 3 Facsimile machines were developed for sending digitized documents over the General Switched Telephone Network (GSTN). These facsimile terminals are now in widespread use around the world. The operation of Group 3 Facsimile terminals has been standardized in ITU-T Recommendations T.4, T.6 and T.30.

The parent application to the Patents-in-Suit resulted in U.S. Patent No. 5,530,558, (the “’558 patent”), which is directed to a particular embodiment of the invention that was

manufactured and sold by Infinity. The ’558 patent is not asserted against any defendant, but provides a priority date for the Patents-in-Suit. In the ’558 patent, Fig. 2e disclosed that the use of digital transmission, namely via RS-232, could be employed as part of the original method. Fig. 2e shows that the serial digital data that is transmitted as part of all other ’558 patent arrangements could be accomplished without use of analog modulation. The ’811 patent further included Fig. 2g, which illustrates another instance showing transmission of the digital serial data between the PC and the fax machine using RS-232 transmission end-to-end without use of any analog modulation. This arrangement utilized all the same elements of a direct connection, passive link and standard transmission, yet was a highly simplified arrangement without modulation where the analog call control signaling was replaced by its digital equivalent (in conjunction with RS-232).

In the ‘811 patent, the Fig 2g embodiment demonstrated that the native digital data could be transmitted without the overhead of complex modulated communication techniques (otherwise referred to as baseband transmission). This was another benefit of embodiments of the Nachman invention, recognizing the common native digital data format used by both the standard facsimile machine and a standard computer.

B. RS232 Serial Communications

RS232 is a form of digital serial communication. It is repeatedly disclosed in the drawings and specification of the Patents-in-Suit.

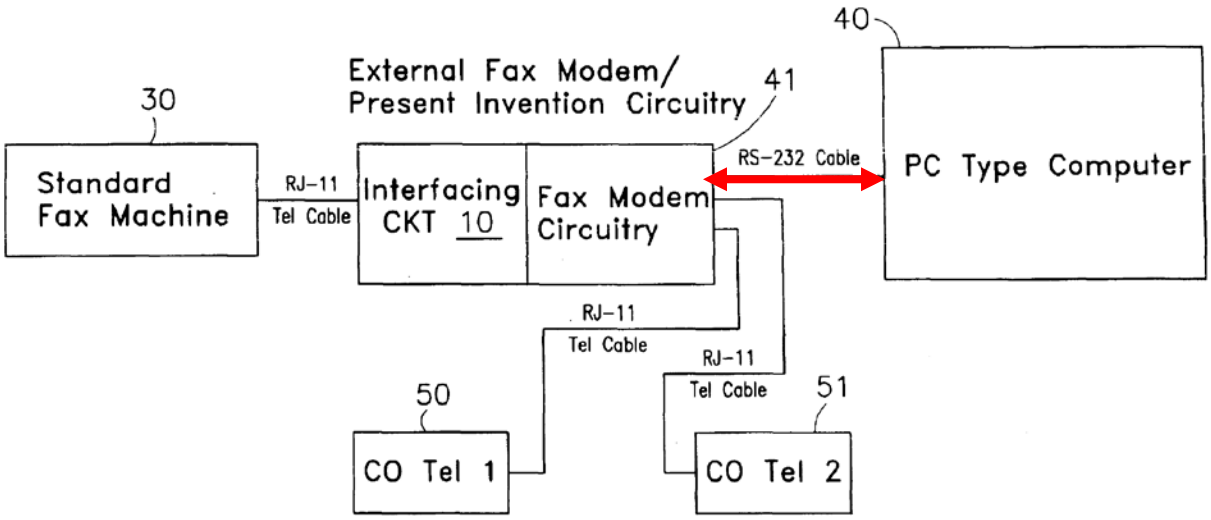


Fig. 2e

'811 Patent, Fig. 2e; *see also* Figs. 2f; 2g. As set forth in the specification, "FIG. 2e shows still another arrangement in which the PC-type computer 40 is coupled to external facsimile modem circuitry 41, for example, through an RS-232 cable." '811 Patent, 6:38-40.

> The RS-232 interface is the Electronic Industries Association (EIA) standard for the interchange of serial binary data between two devices. It was initially developed by the EIA to standardize the connection of computers with telephone line modems. The standard allows as many as 20 signals to be defined but gives complete freedom to the user. Three wires are sufficient: send data, receive data, and signal ground. The remaining lines can be hardwired on or off permanently. The signal transmission is bipolar, requiring two voltages, from 5 to 25 volts, of opposite polarity…. The RS-232-C specifies the signaling rate between the DTE and DCE, and a digital signal is used on all interchange circuits. The RS-232 standard specifies that logic "1" is to be sent as a voltage in the range -15 to -5 V and that logic "0" is to sent as a voltage in the range +5 to +15 V.

RS-232 Recommended Standard 232C (attached as Exhibit 1).

One skilled in the art who may have seen Fig 2e or 2f and not read the specification might make the assumption that a RS-232 connection would be used for modem control via "AT" commands. The use of the RS-232 link for the transfer of digital data is apparent, however, when

a person skilled in the art reads the body of the Nachman specification and further understands the TIA/EIA-578 specification.

The Defendants also incorrectly assert that in the '811 patent as part of Fig. 2g, that a portion of the interface circuit 10 is "replaced with portions of the fax machine's modem." It is rather that as Fig. 2g is a baseband-only communications embodiment for the transfer of the digital data, that previous elements of call control signal generation part of interface circuit 10, used for connection of the facsimile machine to the computer, are instead embodied as part of the RS-232 standard for initiation and control of data flow between the two end devices.

C. Digital Communication Drivers

WIA/STI, TWAIN and PCL are exemplary standard scan and print application interfaces for the purposes of managing image data transfers between the PC applications and the device drivers. Levitt Decl., ¶¶34, 45. Device drivers are low-level software used to facilitate the communications between the PC and other devices such as a fax machine. The device drivers and low-level driver software within the standard Microsoft or Apple operating system frameworks are those which represent the generic elements referenced in the Nachman patents.

Although one might associate the "generic base" to include the software elements of WIA/STI, TWAIN and today the standard PCL printer driver, these in particular are those elements that interface between the applications in the PC and the device drivers. The Patents-in-Suit's "generic send/rec driver communication software" refers to the common communication elements used in certain of the asserted claims by scanning and printing applications for the transfer of image data between the PC and the fax machine.

Depending on the operating system, PC hardware and timeframe of this equipment, the actual elements representing the "generic send/rec driver comm software" have varied, although they are readily identifiable. While the term "generic send/rec driver comm software" and

specifically "generic" was a point of significant discussion during reexamination to determine support in the intrinsic record, it is not the "generic send/rec driver comm software" that is the point of novelty in the Nachman patents. The Nachman patents disclose a method of which one element—driver communications software—is part of a whole group or class. The point of novelty in the Nachman patents is the entirety of the claimed method, which is inclusive of generic communication modes. The inventor, Bruce Nachman, taught that native "digital image data" could be transferred via a generic communication protocol for the purposes of printing and scanning. The generic communication software was disclosed in conjunction with a bi-directional direct connection via a passive link employing standard protocols for communication.

D. The Extensive Examination of the Patents-in-Suit

Each of the Patents-in-Suit have been examined by the USPTO and had their patentability repeatedly confirmed through three separate reexaminations, concluding on July 31, 2012; March 25, 2014; and September 20, 2016 respectively. *See, e.g.*, '811 patent, attached as Exhibit 2, *Ex Parte* Reexamination Certificates (found at the end of the patent document). It is rare that a litigated set of patents has been so thoroughly examined by the U.S. Patent & Trademark Office ("USPTO") and the Board of Patent Appeals (the "Board").

The claim construction task before the Court is thus relieved somewhat by the fact that many of the very same phrases before the Court by Defendants, including "generic," "passive," "protocol" and others have previously been construed by the United States Patent & Trademark Office during the lengthy reexamination process.

In 2016, upon completion of the third round of reexaminations, the Board found support in the original application all of the claims in the '811, '423, '574 and '915 patent claims, without change, and stated that the '558 patent incorporated all of the teaching to support their claims. In other words, the '558 patent taught how a fax machine could be linked with the PC without

modification to material aspects of the facsimile machine consistently with the claims of the Patents-in-Suit. *See, e.g.*, Figs. 2b and 2d.

III. APPLICABLE LAW

A. Claim Construction

Claim construction is the first step in any infringement or validity analysis. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996). A district court should construe the claims in light of their explicit language as informed by their preambles, as well as the patent's specification, figures, and prosecution history. *See Id.* at 980; *see also Graham v. John Deere Co.*, 383 U.S. 1, 33 (1966).

The specification is the "best source for understanding a technical term," to be supplemented, "as needed, by the prosecution history." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (quoting *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1478 (Fed. Cir. 1998)). The prosecution history represents key evidence of how the examiner and the inventor construed the patent. *See Lemelson v. Gen. Mills, Inc.*, 968 F.2d 1202, 1206 (Fed. Cir. 1992). Claims should generally be interpreted in a manner consistent with other claims, as well as with the prosecution history. *See, e.g., Bell Howell Document Mgmt. Prods. Co. v. Altek Sys.*, 132 F.3d 701 (Fed. Cir. 1998). Moreover, claim terms in patents sharing a common specification and application should usually be given the same interpretation. *See, e.g., NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1293 (Fed. Cir. 2005) (rehearing en banc denied); *Microsoft Corp. v. Multi-Tech Sys. Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (rehearing en banc denied).

It is improper to confine a claim to a particular embodiment; the claim language itself is paramount. *See, e.g., Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1370 (Fed. Cir. 2008); *accord Phillips*, 415 F.3d at 1325 (favoring plain and ordinary meaning of the claim language over importing limitation from the preferred embodiment). Extrinsic evidence may also be relevant to

claim construction. *See Phillips*, 415 F.3d at 1317. Such evidence consists of all evidence extrinsic to the patent and its prosecution history, including "expert and inventor testimony, dictionaries, and learned treatises." *Id.* (internal quotation omitted). While authorizing examination of extrinsic evidence, the Federal Circuit has warned that while it "can shed useful light on the relevant art," it is "less significant than the intrinsic record in determining the legally operative meaning of claim language." *Id.*

B. Section 112, Paragraph 6

To determine whether § 112, para. 6 applies to a claim limitation, our precedent has long recognized the importance of the presence or absence of the word 'means.' "*Williamson*, 792 F.3d at 1348.[1] The failure to use the word "means" creates a rebuttable presumption that § 112, ¶ 6 does not apply. *Id.* But the presumption can be overcome, and § 112, ¶ 6 will apply, "if the challenger *demonstrates* that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function." *Id.* (emphasis added) (internal quotation marks, brackets, and citation omitted); *see also Advanced Ground Info. Sys., Inc. v. Life360, Inc.*, 830 F.3d 1341, 1347 (Fed. Cir. 2016) ("In determining whether this presumption has been rebutted, the challenger must establish by a preponderance of the evidence that the claims are to be governed by § 112, ¶ 6.").

When evaluating whether a claim limitation invokes § 112, ¶ 6, the essential inquiry remains whether, in the context of the entire claim, "the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure." *Williamson*, 792 F.3d at 1348; *Greenberg*, 91 F.3d at 1583 ("What is important is ... that the term,

[1] Of course, since all of the asserted claims here are method claims, the step-plus-function language of 35 U.S.C. Section 112, paragraph 6 applies here. The Federal Circuit has not differentiated treatment between "step" and "means" in this context.

as the name for structure, has a reasonably well understood meaning in the art."). That determination must be made under the traditional claim construction principles, on an element-by-element basis, and in light of evidence intrinsic and extrinsic to the asserted patents. *See, e.g.*, *Personalized Media Commc'ns, LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 702–04 (Fed. Cir. 1998) (stating that "[w]hether certain claim language invokes 35 U.S.C. § 112, ¶ 6 is an exercise in claim construction" and that the presumption that § 112, ¶ 6 does not apply "can be rebutted if the evidence intrinsic to the patent and any relevant extrinsic evidence so warrant"); *Cole v. Kimberly–Clark Corp.*, 102 F.3d 524, 531 (Fed. Cir. 1996) (noting that whether § 112, ¶ 6 is invoked involves an analysis of the "patent and its prosecution history," and consulting a dictionary definition of "perforation" to understand if one of skill in the art would understand the term to connote structure). The district court must undertake that inquiry and make related factual findings.

Where none of the limitations at issue uses the word "means," presumptively, § 112, ¶ 6 does not apply to the limitations. *Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1007–08 (Fed. Cir. 2018). In *Zeroclick,* Apple argued that the limitations must be construed under § 112, ¶ 6, but provided no evidentiary support for that position. Accordingly, Apple failed to carry its burden, and the presumption against the application of § 112, ¶ 6 to the disputed limitations remained unrebutted. The district court's discussion is revealing: its determination that the terms must be construed as means-plus-function limitations is couched in conclusory language. The court relied on Apple's arguments, contrasting them against Zeroclick's contentions, but pointed to no record evidence that supports its ultimate conclusion regarding whether § 112, ¶ 6 applies to the asserted claims. *Cf.* J.A. 10 ("[T]he Court concludes that the term 'program that can operate the movement of the pointer (0)' is a means-plus-function term because the claim itself fails to recite any structure whatsoever, let alone 'sufficiently definite structure.'" (quoting *Williamson*, 792 F.3d at 1349));

J.A. 12 ("[B]ecause the use of the phrase 'user interface code' provides the same 'black box recitation of structure' as the use of the word 'module' did in *Williamson*, and the claim language provides no additional clarification regarding the structure of the term, the Court concludes that 'user interface code' constitutes a means-plus-function term." (quoting *Williamson*, 792 F.3d at 1350)). The court thus legally erred by not giving effect to the unrebutted presumption against the application of § 112, ¶ 6.

C. Validity and The Definiteness Requirement

The Supreme Court in *Nautilus, Inc. v. Biosig Instruments, Inc.* held that a patent claim is indefinite if, when "read in light of the specification delineating the patent, and the prosecution history, [the claim] fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention." 572 U.S. 898 (2014). "Reasonable certainty" does not require "absolute or mathematical precision." *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1381 (Fed. Cir. 2015).

It is important to note that patents are "not addressed to lawyers, or even to the public generally," but rather to those skilled in the relevant art. *Carnegie Steel Co. v. Cambria Iron Co.*, 185 U.S. 403, 437 (1902) (also stating that "any description which is sufficient to apprise [steel manufacturers] in the language of the art of the definite feature of the invention, and to serve as a warning to others of what the patent claims as a monopoly, is sufficiently definite to sustain the patent"). Defendants have the burden of proving indefiniteness by clear and convincing evidence. Id. at 1377. *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir. 2017).

The Supreme Court has held that a phrase in not indefinite if it is "precise enough to afford clear notice of what is claimed, [and] thereby 'apprise the public of what is still open to them.'" *Nautilus*, 134 S.Ct. at 2129 (quoting *Markman v. Westview Instruments, I*nc., 517 U.S. 370, 373 (1996) (alterations omitted). Under the standard set forth in *Nautilus*, claims are not indefinite

when, viewed in light of the specification and prosecution history, they inform a person of ordinary skill about the scope of the invention with reasonable certainty. *Id*.

IV. INFINITY'S CLAIM CONSTRUCTION POSITIONS

A. Level of Ordinary Skill and Date of Invention

Infinity contends that that the level of ordinary skill in this art at the time of filing of the Patents-in-Suit would have been someone with at least a B.S. in electrical engineering or equivalent, or at least 3 years of experience in the field of designing telecommunications systems or driver and embedded software.

B. The "Facsimile Machine" Terms

Term/Phrase	Defendants' Construction	Plaintiff's Construction
"facsimile machine" / "fax machine" '811, cl. 1, 2, 4, 6, 7, 18-20 '423, cl. 1-4, 6 '574, cl. 1, 2, 4, 5, 7, 8 '915, cl. 1, 6-9, 14, 15	"a device that transmits scanned information, or receives information for printing, only in compliance with a CCITT/ITU-T facsimile standard"	No construction necessary or "a device that is capable of sending and receiving a fax, including associated scan and print functionality"

Defendants' proposed construction would take a relatively simple, understandable pair of words and turn them into a list of unrequired limitations. Their treatment of this simple phrase is exemplary of Defendants' overarching approach of adding many limitations that are not present in the claims.

> We have frequently stated that the words of a claim "are generally given their ordinary and customary meaning." *Vitronics*, 90 F.3d at 1582; *see also Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1299 (Fed. Cir. 1999); *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998). We have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application. *See Innova*, 381 F.3d at 1116 ("A court construing a patent claim seeks to accord a claim the meaning it would have to a person of ordinary skill in the art at the time of the invention."); *Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1358 (Fed. Cir. 2004) ("customary meaning" refers to the "customary

> meaning in [the] art field"); *Ferguson Beauregard/Logic Controls v. Mega Sys., LLC*, 350 F.3d 1327, 1338 (Fed. Cir. 2003) (claim terms "are examined through the viewing glass of a person skilled in the art").

Phillips v. AWH Corp., 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (*en banc*).

Among the limitations Defendants would add to this simple phrase are the following:

1. Transmits scanned information only in compliance with a CCITT/ITU-T facsimile standard; and

2. Receives information for printing only in compliance with a CCITT/ITU-T facsimile standard.

Neither is required by the claim language, and neither is an appropriate addition to the claim. Indeed, it is inaccurate to say that facsimile machines must communicate with this standard. *See* Levitt Decl., ¶¶53-54.

The Defendants' alleged basis, that the specification and claims describe a "standard" or "generic" machine, answers itself. The claim term Defendants have selected for construction includes neither "standard" nor "generic." To the extent those phrases form part of the asserted claims, they are addressed elsewhere in the claim. Moreover, nothing about the term "facsimile machine" precludes the addition of additional capabilities. Defendants' system still infringes under black letter patent law that the addition of elements to an infringing core *does not negate* infringement. *See CIAS, Inc. v. Alliance Gaming Corp*., 504 F.3d 1356, 1360 (Fed. Cir. 2007) (infringing device may include additional, unrecited elements).

The capability to communicate in accordance with a CCITT/ITU-T recommendation or standard does not entail that no other communication capability can be provided.

> For instance, although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments. *See, e.g., Nazomi Communications, Inc. v. ARM Holdings, PLC*, 403 F.3d 1364, 1369 (Fed. Cir. 2005) (claims may embrace "different subject matter than is illustrated in the specific embodiments in the specification").

Phillips, 415 F.3d at 1323; *cf.* Levitt Decl., ¶¶53-54.

Moreover, adding words to actual claim language has been repeatedly rejected by the Federal Circuit. *See Source Vagabond Sys. Ltd. v. Hydrapak, Inc.*, 753 F.3d 1291, 1299 (Fed. Cir. 2014) ("Source added words to the actual claim language, thus changing the relevant comparison from the slot to the diameter of the rod to the slot to the diameter of the rod added to the thickness of the container folded over it. Instead of looking to the words themselves, Source added language without support from the specification or prosecution history, altering otherwise unambiguous claim language, a practice this court has repeatedly rejected.").

While Defendants seek to confine this term to a particular embodiment, it is improper to do so; the claim language itself is paramount. *See, e.g., Innogenetics*, 512 F.3d at 1363, 1370. Defendants' attempt to re-write the claim language by importing limitations from the specification is improper. *See Phillips*, 415 F.3d at 1323 (holding that while claim terms are understood in light of the specification, a claim construction must not import limitations from the specification into the claims).

Plaintiff does however agree with Defendants that the CCITT recommendations reflect generic communications protocols. This is at play in later discussions, *infra*.

C. **"Passive Link"**

Term/Phrase	Defendants' Construction[17]	Plaintiff's Construction

"passive link" '811, cl. 1, 6, 7, 18-20 '423, cl. 1, 2, 6 '574, cl. 1, 7, 8 '915, cl. 1, 9	Indefinite or alternatively "a link where the initiation of data flow is activated from a set-up procedure within the PC and/or the facsimile machine, and said data is transferred, with no intervening apparatus or signal interception by a processing element or any active component, along the path of an unbroken direct connection between the PC and the facsimile machine, for purposes of providing both scanning or printing data"	No construction necessary or "a passive link is one where the initiation of data flow is activated from a setup procedure within the PC and/or the facsimile machine, and the data is transferred with no intervening apparatus or signal interception by a processing element or any active component, along the path of an unbroken direct connection between the PC and facsimile machine"

1. "Passive Link" Has Been Construed by the USPTO and the PTAB

Defendants' expert declaration and argument relating to "passive link" should be rejected. Plaintiff's construction is adopted verbatim from the Board's language:

> Turning to the claims, independent claims 1, 7, 19, and 20, recite, in pertinent part, coupling a fax machine to a computer over a bi-directional direct connection via a *passive link*. As Dr. Marc E. Levitt indicates in his Declaration filed November 12, 2014 ("Levitt Decl."), the term "passive link" is defined as:
>
> > [O]ne where the initiation of data flow is activated from a set-up procedure within the PC and/or the facsimile machine, and said data is transferred, *with no intervening apparatus or signal interception by a processing element or any active component*, along the path of an *unbroken direct connection* between the PC and facsimile machine . . . .

July 19, 2016 Decision on Appeal reversing Examiner (re: '811 patent) at 6 (attached as Exhibit 3). As can be seen, Infinity adopts the recitation on which the Board relied in Infinity's successful appeal verbatim.

The Federal Circuit places significant weight on the fact that the subject matter experts at the patent office, and in this case the Board, have scrutinized a term and not found it to be indefinite.

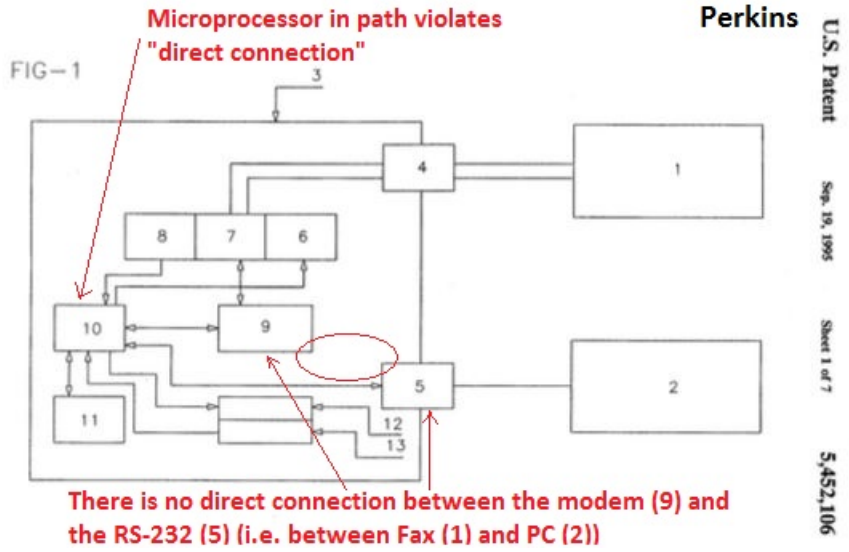
> The examiner's own remarks confirm that the claim language informs a person of ordinary skill of the objective boundaries of the claim term. Additionally, we presume that an examiner would not introduce an indefinite term into a claim when he/she chooses to amend the claim for the very purpose of putting the application in a condition for allowance. *See Northern Telecom, Inc. v. Datapoint Corp*., 908 F.2d 931, 939 (Fed. Cir. 1990) ("It is presumed that public officials do their assigned jobs").

Tinnus Enterprises, LLC v. Telebrands Corp., 733 F. App'x 1011, 1019 (Fed. Cir. 2018) (emphasis added).

On pages 9-14 of his Declaration, Defendants' expert, Mr. Randolph, argues that to the extent Infinity argued that the Perkins reference (U.S. Patent No. 5,452,106, attached as Exhibit 4) did not disclose a passive link, it is irreconcilable that Fig. 2b discloses a passive link. *See* Randoph Decl., ¶46. This is incorrect. What is at issue in both parties' proposed constructions is whether there is intervention of the data flow, and/or whether it is intercepted by an active element. An active element entails a processor that performs processing on the image data. Levitt Decl., ¶¶49 *et seq*. Fig. 2b does not show an active element because it does not include an intervening processor. Perkins, by way of contrast, explicitly teaches an active element including an intervening processor that Mr. Randolph intentionally or inadvertently overlooks. Levitt Decl., ¶¶64.

FIG. 2b does not put a microprocessor IN the path whereas Perkins does. Modulation/demodulation does not itself violate "passive link" as long at the underlying image

data is not processed in some way by an intervening device. This is why the '558 and '811 both exhibit a passive link.



A review of the Perkins reference causes the purported conflict to dissipate. Perkins teaches away from "passive link" as there are active processing elements and storage elements in the data path. Perkins teaches away from "direct" as the path is not from the facsimile to the computer or vice versa but rather control is intercepted and processed via the microprocessor and data is stored in a memory in the device. *See also* Perkins, Abstract, Figs. 1-4; Figs. 5-7; 4:10-23; 4:27-34; 4:62-68 (processing elements); 5:5-9; 5:15-19; 5:31-34; 5:42-47; 4:53-59; 6:1-6; 6:41-43; 7:45-47.

2. Plaintiff's Proposed Construction is Correct

The principal disagreement of the parties is the inclusion of the final clause, "for purposes of providing both scanning or printing data." The term under construction is a "passive link." The data transmitted over the passive link is not part of the construed phrase. In the context of the asserted claims, it is not required that the "passive link" provide both scanning and printing data.

For example, '811 patent claim 1 provides:

> **1.** A method of creating a scanning capability from a facsimile machine to a computer, with scanned image digital data signals transmitted through a bi-directional connection ***via a passive link*** between the facsimile machine and the computer, comprising the steps of:
>
> by-passing or isolating the facsimile machine and the computer from the public network telephone line;
>
> coupling the facsimile machine to the computer;
>
> conditioning the computer to receive digital facsimile signals representing data on a scanned document; and
>
> conditioning the facsimile machine to transmit digital signals representing data on a scanned document to the computer, said computer being equipped with send/receive driver communications software enabling the reception of scanned image signals from the facsimile machine, said transmitted digital facsimile signals being received directly into the computer through the bi-directional direct connection ***via the passive link***, thereafter, said computer processing the received digital facsimile signals of the scanned document as needed.

'811 patent, claim 1 (emphasis added). In both instances in which the phrase "passive link" appears, digital data signals are passed over the passive link from the facsimile machine to the computer. First, it is improper to construe "passive link" by the type of data that is passed over the link. Second, Defendants' proposed construction ignores the plain claim language, which makes no reference to printing at all.

Secondly, the phrase that Defendants would add includes the disjunctive "or," namely "printing ***or*** scanning." Any suggestion or implication by Defendants that both printing ***and*** scanning must be provided should thus be rejected.

Finally, notwithstanding the similarity in the language of the construction, Infinity anticipates another important distinction in terms of how this construction is applied. Of course, any physical communication channel has some circuitry along its route and it is clear, for example that fundamental RS-232 interface circuits including electrical current drivers would be within scope of the passive link as they are exemplary of the passive link per the '558 patent, and by

extension, basic USB interface circuits would also fall into this category. What is key here with respect to the exclusion of "intervening apparatus or signal interception" is that in order to be considered passive, no apparatus along the route must actually intervene or intercept the image data signal for modification. This is distinct from simply routing or passing along the signal.

D. The "Generic Send/Receive Driver Communications Software" Terms

Term/Phrase	Defendants' Construction	Plaintiff's Construction
"generic send/receive driver communications software" / "generic send receive driver communications software" / "generic send or receive communications software" / "generic send and receive driver communications software" Defendants incorrectly assert these terms appear in the following claims. Those terms in which it does appear are highlighted: '811, cl. 1, 6, 18-20 '423, cl. **1, 2, 6** '574, cl. **1, 7, 8** '915, cl. **1, 9**	Each of the claim phrases as a whole is indefinite. Alternatively, the term "generic" means: "off-the-shelf and neither customized, proprietary, manufacturer-specific, nor tailored for a specific application or process"; and the "send/receive driver communications software" terms mean: "software that controls a peripheral and provides all instructions necessary to accomplish the tasks of printing from the personal computer to the facsimile machine and/or scanning from the facsimile machine to the personal computer, in a standard CCITT/ITU-T facsimile format"	No construction necessary or "driver communications software capable of interfacing with a facsimile machine using standard communications protocols on a standard PC"

As Defendants set forth in their Opening Brief, there has been a fair amount of discussion with respect to the "generic" requirement of these claim terms. What Defendants fail to acknowledge, however, is that following this dialogue between the U.S. Patent & Trademark Office and the Applicant, the USPTO agreed with and accepted the definition of the term "generic"

and allowed the patent claims. There is no indefiniteness or uncertainty with respect to what generic means or that to which it is applied.

Dr. Marc Levitt provided a Declaration in connection with the reexamination of the '811 patent. In it, Dr. Levitt agrees with the Examiner that "generic" means "relating to, or characteristic of a whole group or class." *See* Declaration One of Dr. Marc E. Levitt dated Dec. 27, 2013 ("Levitt Decl. 1") (attached as Exhibit 5); Declaration One of Dr. Marc E. Levitt dated Nov. 2, 2014 ("Levitt Decl. 3") (attached as Exhibit 6). This definition is found in the contemporaneous IBM Dictionary of Computing (10th Ed. August 1993). *See* Exhibit 7.

The USPTO Examiner explicitly adopted this definition in the Reexamination Determination.

> The Examiner in the '816 reexamination found claims 1-6 and 18-20 of the '811 patent patentable based upon a new interpretation of the claimed *generic* send/receive driver communications software, as argued by the Patent Owner in response to the final rejection, and supported by the first Levitt Declaration (see response filed 30 December 2013, pages 7-17). In allowing claims 1-6 and 18-20, the Examiner adopted the following interpretation for this feature: **a group or class of send/receive driver communications software capable of interfacing with a standard/conventional facsimile machine using standard communication protocols on a standard PC**.

June 19, 2014 Reexam Determination at 15 (re: '811 patent) at 15 (emphasis in original) (attached as Exhibit 8); *see also Ex Parte* Reexamination Advisory Action dated May 7, 2015 at 6 ("As noted in the final Office action, the term "generic" was construed to mean that the claimed software is "capable of interfacing with a standard/conventional facsimile machine using standard communication protocols on a standard PC.") (attached as Exhibit 9).

Defendants are correct that the Applicant and the USPTO agreed that "generic" modifies "communications." *See* Opening Brief at 27 *et seq*. They are incorrect—and at odds with the USPTO and the Board—that there was any inconsistency. They ask this Court to believe them over the impartial professionals at the USPTO and the Board who have repeatedly reaffirmed the validity of the claims of the Patents-in-Suit, including with respect to the generic limitation.

What Infinity asserts and with respect to which it agrees with the USPTO is that the software must support communications using a generic protocol. That is not to say, as Defendants suggest, that adding any modification to the software changes the fact that generic communications are supported by the software.

In the reexamination proceedings, the USPTO explicitly acknowledged that the patentee asserted that generic was applied to communications rather than the entirety of the software. It laid out that understanding explicitly below.

> Here, the patent owner argues that the term "generic" was added to the claims to describe the "send/receive driver communications" rather than the "software" itself. The patent owner argues that the software implements the communications and that "it is the communications that comply with the standards." In other words, the patent owner argues that the claims are directed to software that implements "generic send/receive driver communications." See the patent owner's remarks filed on April 13, 2015 at pages 5-6.

Exhibit 9 at 7. After setting forth his understanding of Infinity's position and the entirety of the intrinsic record, the Examiner agreed with and adopted it:

> After considering the evidence and record as a whole, the examiner finds that the patent owner's arguments are persuasive. Thus, the examiner agrees that the "generic send/receive driver communications software" limitation is adequately supported in the originally filed disclosure of the '278 application.

Id. at 8 (emphasis added).

There are several well-known examples of generic send/receive driver communications software. For example, WIA/STI, TWAIN and the PCL printer driver are generic interfaces between the applications in the PC and the devices. Nachman's reference to "generic send/rec driver comm software" refers to the common communication elements used by scanning and printing applications for the transfer of image data between the PC and the fax machine. The meaning of this phrase would thus be readily understood by a person of ordinary skill in the art. *See* Levitt Decl., ¶¶70 *et seq*.

3. "Generic"

As a preliminary matter, "generic" does not appear in several of the claims that Defendants assert it does. Contrary to their representation in the Opening Brief, "generic" does not appear in the asserted claims of the '811 patent.

Secondly, "generic" was added during *Ex Parte* Reexamination, and was blessed by the Examiner. This is salient evidence both of the proper construction of the term and that it is not indefinite. A recent case decided by the Federal Circuit had similar facts.

> ***The prosecution history provides further evidence that the claim term is not indefinite. As stated above, the original claims of the application that issued as the '066 patent did not contain the disputed claim term. Rather, the examiner added the language in an examiner's amendment in the Notice of Allowance***. In the examiner's reasons for allowance, the examiner stated that these additions "define a configuration and functional capability of the elastic fasteners that is not taught by [the prior art]. In particular, the language beginning with 'such that

> shaking ...' defines an upper limit of the connecting force and thus defines the elastic fastener in a way that distinguishes over [the prior art]." J.A. 107–08.
>
> The examiner's own remarks confirm that the claim language informs a person of ordinary skill of the objective boundaries of the claim term. Additionally, we presume that an examiner would not introduce an indefinite term into a claim when he/she chooses to amend the claim for the very purpose of putting the application in a condition for allowance. *See Northern Telecom, Inc. v. Datapoint Corp*., 908 F.2d 931, 939 (Fed. Cir. 1990) ("It is presumed that public officials do their assigned jobs"). ***Thus, we find that the '066 patent is not indefinite under the Nautilus standard because the claims, viewed in light of the specification and prosecution history, inform a person of ordinary skill about the scope of the invention with reasonable certainty***.

Tinnus Enterprises, LLC v. Telebrands Corp., 733 F. App'x 1011, 1019 (Fed. Cir. 2018) (emphasis added).

4. "Send/Receive Driver Communications Software"

Defendants fabricate a construction for "send/receive driver communication software" that is (1) improperly taken out of the context of the claim; and (2) has no support in the intrinsic record, and must be rejected.

First, a claim term must be construed in context. The meaning of claim terms often depends on the context in which they appear.

Claim terms are not interpreted in a vacuum, devoid of the context of the claim as a whole. *See Hockerson-Halberstadt, Inc. v. Converse Inc*., 183 F.3d 1369, 1374 (Fed. Cir. 1999) ("proper claim construction ... demands interpretation of the entire claim in context, not a single element in isolation."); *ACTV, Inc. v. Walt Disney Co*., 346 F.3d 1082, 1088 (Fed. Cir. 2003) ("While certain terms may be at the center of the claim construction debate, the context of the surrounding words of the claim also must be considered...."). In *Ultimax Cement Manufacturing Corp. v. CTS Cement Manufacturing Corp.*, 587 F.3d 1339, 1347-48 (Fed. Cir. 2009), the Federal Circuit reaffirmed that the context matters in reversing a district court grant of summary judgment that certain patent claims were not infringed or were invalid for indefiniteness under the second paragraph of 35

U.S.C. § 112. The Federal Circuit held that the district court in *Ultimax Cement* repeatedly went astray in failing to interpret two disputed claim terms in the appropriate context.

E. "Using an Unmodified Standard Protocol for Shifting the Personal Computer to a Connected Mode"

Term/Phrase	Defendants' Construction	Plaintiff's Construction
"using an unmodified standard protocol for shifting the personal computer to a connected mode" '811, cl. 7	"using a set of instructions, each of which is unmodified and described in a facsimile standard promulgated by the CCITT/ITU-T, to establish a communication link between the personal computer and the facsimile machine"	No construction necessary. A person of skill in the art would not understand shifting the personal computer to a connected mode to be limited to a specific standard.

Defendants' proposal changes the meaning of the claim language in several particulars. Instead of a ***protocol*** as claimed, ***instructions*** are required by Defendants' proposal.

A protocol is not a set of instructions, it is a set of rules. As the USPTO has acknowledged:

> The patent owner states that the term "protocol" refers to "a set of rules governing the format of messages that are exchanged between computers." The patent owner argues that in the '278 application, the protocol or the set of rules "is necessarily implemented by software" on the PC-type computer 40, and that due to the disclosure of a "Group 3" facsimile machine 30, the disclosed "standard" protocol would include the use of AT commands in accordance with the EIA/TIA-578 standards. The patent owner notes that ITU-T Recommendations T.30 and T.4 define the operation of a "Group 3" facsimile machine while referencing the EIA/TIA-578 standards. The patent owner argues that the EIA/TIA-578 standards specify the data link layer protocol between the computer and the facsimile machine, including the use of the AT command set, and that the data link layer protocol together with the T.30 and T.4 specifications constitute the claimed "generic send/receive driver communications." The patent

> owner argues that the software implementing the communications represents "driver" software and concludes that the software is necessarily "generic send/receive driver communications software." See the patent owner's remarks filed on April 13, 2015 at page 6 and April 21, 2015 at page 2.

Exhibit 9 at 7-8. This understanding of "protocol" was ultimately adopted by the USPTO.

> After considering the evidence and record as a whole, the examiner finds that the patent owner's arguments are persuasive. Thus, the examiner agrees that the "generic send/receive driver communications software" limitation is adequately supported in the originally filed disclosure of the '278 application.

Id. at 8. This accords with contemporaneous dictionaries. *See, e.g.*, IBM Dictionary of Computing (10th Ed. August 1993) at 542, which defines "protocol" as "a set of semantic and syntactic rules that determines the behavior of functional units in achieving communication."

More saliently, no specific protocol is identified in the claim. The claim is intentionally agnostic as to the unmodified standard protocol used. Defendants' proposal would mandate a specific set of instructions, "a facsimile standard promulgated by the CCITT/ITU-T," which is not claimed. Defendants' Opening Brief at 37.

The patent also discloses other protocols for shifting a personal computer to a connected mode, including RS232.

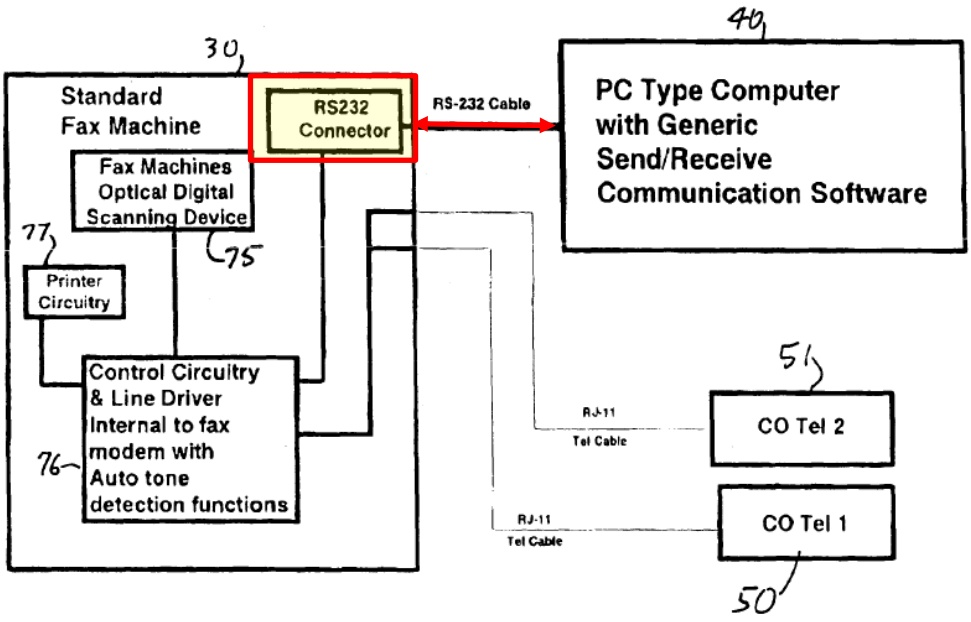


Fig. 2g

'811 patent, Fig. 2g; *see also, e.g.*, '811 patent, 6:38-40; 6:51-54; 8:7-13; claim 8. RS-232 is a standard communication protocol for linking computer and its peripheral devices to allow serial digital data exchange (e.g., EIA/TIA-232-E). In simple terms, RS232 defines, among other things, the signaling voltages representing 0s and 1s of the digital data transmission for the path used for data exchange between the devices. Levitt Decl., ¶¶117, 123.

The claim requires shifting to a connected mode. A mode of operation is essentially a state of the system that provides for the described functionality to be operable. *See, e.g., PPC Broadband, Inc. v. Iancu*, No. 2017-1362, 2018 WL 3239492, at *2 (Fed. Cir. July 3, 2018). Instead of a connected mode, a "communication link" is required. Simply put, Defendants' proposal rewrites the claim language and is fraught with difficulties.

F. The "By-passing or Isolating" Terms

Term/Phrase	Defendants' Construction	Plaintiff's Construction

"by-passing or isolating the facsimile machine and the computer from the public network telephone line" / "both the facsimile machine and [personal] computer isolated from said at least one public network telephone line" '811, cl. 1, 6, 7, 20	"disconnecting the facsimile machine and the computer from the public telephone network" / "the facsimile machine and the computer having been disconnected from the public telephone network"	No construction necessary or "the data flow of the scan or print data circumvents the public network telephone line"

Here, Defendants would replace the term "bypassing" or "isolating" with "disconnecting." The apparent purpose of the replacement of the claim terms is to generate a noninfringement defense based on the implication that something must be physically disconnected, as opposed to electrically bypassed or isolated, meaning the absence of an electrical path. Defendants' modification of the plain and ordinary meaning of the claim language should be rejected.[2]

What should be understood by these terms is that the public telephone line is removed from the data flow of the scan data or in other words, the image data does not need to make use of the public telephone network to connect between a fax and PC that are in many cases side-by-side on a desktop but that data can take a more direct path (i.e., the passive link). A similar determination was made in *Southwestern Bell Telephone, L.P., et al. v. Arthur Collins, Inc.*, 454 F. Supp. 2d 600 (E.D. Tex. 2006), in which "bypass" was construed as "a structure and path by which data channels

[2] It should be noted that although these terms appear in the '811 patent, neither term appears in the '915 patent, '574 patent, or U.S. Patent No. 7,489,423 (the "'423 patent), which is a divisional of application No.08/669,056, now U.S Patent No. 6,894,811. *See, e.g.*, claim 6, of the '423 patent for scanning and printing, effectively not using the bypass and isolation terminology, after its issue date of February 10, 2009.

completely go around and in no respect go through the TST switch." Similarly, "isolating" has been construed in accordance with Infinity's proposal: "the absence of an electric path permitting the flow of DC current (other than a *de minimus* amount) between an input and an output of a particular stage, component, or circuit." *SynQor, Inc. v. Artesyn Technologies, Inc., et al.*, 2010 WL 2881037 (E.D. Tex., Jul. 26, 2010).

G. The "Facsimile Signals" Terms

Term/Phrase	Defendants' Construction	Plaintiff's Construction
"facsimile signals" / "a facsimile machine signal" / "digital facsimile signals of the scanned document" / "scanned image signals from the facsimile machine" / "transmitted facsimile signals" / "facsimile machine communications signals"	"signals that transmit data that are encoded in accordance with a facsimile standard promulgated by the CCITT/ITU-T"	No construction necessary.
"facsimile format" / "a standard facsimile machine format"	"a format that is described by a facsimile standard promulgated by the CCITT/ITU-T"	
"scanned facsimile machine image data" '811, cl. 1, 6, 7, 18 '423, cl. 2 '915, cl. 1, 9	"data that are encoded in accordance with a facsimile standard promulgated by the CCITT/ITU-T"	

Infinity contends that "facsimile signals" requires no construction. They are signals of a facsimile machine. Facsimile machine is construed *supra*.

Defendants' construction can be rejected for at least two reasons: (i) the construction would require transmission ("transmit data") when several of the terms that Defendants lump into this category have no such requirement; and (ii) they require a specific signal encoding, namely "a facsimile standard promulgated by the CCITT/ITU-T."

The latter requirement is not present in the claims and should be rejected. *See also* Levitt Decl., ¶¶53-54. Moreover, part of the invention is that generic communications are provided by the facsimile machine. These generic communications need not be encoded in accordance with "a facsimile standard promulgated by the CCITT/ITU-T." Instead, they must simply comprise facsimile signals and as clarified in many instances, it is the transfer of the image data representing the scanned or printed document that is of importance. Levitt Decl., ¶¶83-89.

H. "Using a Standard Protocol of the Facsimile Machine"

Term/Phrase	Defendants' Construction	Plaintiff's Construction
"using a standard protocol of the facsimile machine" '915, cl. 1 & 9	"using a set of instructions that are described by a facsimile standard promulgated by the CCITT/ITU-T"	No construction necessary or "using a standard set of rules that are supported by the facsimile machine"

Defendants' proposal changes the meaning of the claim language in several particulars. Instead of a protocol as claimed, instructions are required by Defendants' proposal.

A protocol is not a set of instructions, it is a set of rules. As the USPTO has acknowledged:

> The patent owner states that the term "protocol" refers to "a set of rules governing the format of messages that are exchanged between computers." The patent owner argues that in the '278 application, the protocol or the set of rules "is necessarily implemented by software" on the PC-type computer 40, and that due to the disclosure of a "Group 3" facsimile machine 30, the disclosed "standard" protocol would include the use of AT commands in accordance with the EIA/TIA-578 standards. The patent owner notes that ITU-T Recommendations T.30 and T.4 define the operation of a "Group 3" facsimile machine while referencing the EIA/TIA-578 standards. The patent owner argues that the EIA/TIA-578 standards specify the data link layer protocol between the computer and the facsimile machine, including the use of the AT command set, and that the data link layer protocol together with the T.30 and T.4 specifications constitute the claimed "generic send/receive driver communications." The patent owner argues that the software implementing the communications represents "driver" software and concludes that the software is necessarily "generic send/receive driver communications software." See the patent owner's remarks filed on April 13, 2015 at page 6 and April 21, 2015 at page 2.

Exhibit 9 at 7-8. This understanding of "protocol" was adopted by the USPTO.

> After considering the evidence and record as a whole, the examiner finds that the patent owner's arguments are persuasive. Thus, the examiner agrees that the "generic send/receive driver communications software" limitation is adequately supported in the originally filed disclosure of the '278 application.

Id. at 8. This accords with contemporaneous dictionaries. *See, e.g.*, Exhibit 7 at 542 ("a set of semantic and syntactic rules that determines the behavior of functional units in achieving communication.").

The context of claim 1 of the '915 patent indicates that the "standard protocol of the facsimile machine" is used for receiving a print instruction from the computer:

> ***receiving an instruction*** at the digital communications port from the computer to place the facsimile machine into a print mode, ***the instruction being received using a standard protocol of the facsimile machine***;

'915 patent, claim 1 (emphasis added). This clearly illustrates the distinction between instruction and protocol. The protocol itself is not an instruction, as argued by Defendants, it is a set of rules for communication to receive an instruction. Defendants' construction must accordingly be rejected. Levitt Decl., ¶¶90-93.

Secondly, and a recurring theme of Defendants' proposals, is that Defendants would limit the "standard protocol of the facsimile machine" to a specific thing, namely: "facsimile standard promulgated by the CCITT/ITU-T." While that may satisfy the limitation, the limitation should not be narrowed by limiting it to a single such protocol, which would run afoul of the leading claim construction case, *Phillips*:

> [A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments. *See, e.g.*, *Nazomi Communications, Inc. v. ARM Holdings, PLC*, 403 F.3d 1364, 1369 (Fed. Cir. 2005) (claims may embrace "different subject matter than is illustrated in the specific embodiments in the specification");

Phillips, 415 F.3d at 1323.

I. The "Digital Signals" Terms

Term/Phrase	Defendants' Construction	Plaintiff's Construction

"digital signals" / "digital … signal(s)" '811, cl. 1, 7, 19, 20 '423, cl. 1, 2, '574, cl. 1, 8	"signals that carry data in the form of digits or interval quantities, and not in analog form"	No construction necessary or "binary data signals, which are signals comprising a sequence of voltages, wherein the voltages represent discrete values of digital data, most typically 1s and 0s of a binary number"

Defendants' proposal is ambiguous and potentially incorrect. The USPTO has differentiated between digital data and "digital signals," noting that analog signals can carry digital data.

> First, as set forth in the final Office action, the record as a whole shows a distinction between "digital data" and "digital signals." The arguments cited by the patent owner state that "data in digital serial format … is then sent to a modem, where modulation merges the digital serial data with an analog tone data carrier wave," resulting in a "final analog carrier wave signal out" (see the response filed on November 19, 2004 in the '056 application at page 11). Thus, while the *data* sent to and from the modem could be considered digital data or "serial digital data," the patent owner's statements suggest that the *signals* transmitted over the RJ-11 telephone cable are analog signals, not digital signals.

Exhibit 9 at 10 (emphasis added). Defendants' proposed construction is ambiguous as to whether the underlying data must not be analog (with which Infinity agrees), or the signals themselves must not be analog (which is incorrect). Levitt Decl., ¶¶94-99.

Digital data may be transmitted via analog carrier, either a continuous waveform, or as a digitally modulated waveform. Or digital data may be modulated via binary coding for example, making the modulation digital. Levitt Decl., ¶40-42. Defendants' definition is suggesting the data cannot be sent as analog data continuous waveform. The Plaintiff's definition more specifically discloses the transmission to being digital transmission, while leaving open it to being digitally modulated analog transmission, digital modulation or baseband transmission.

J. The "Bidirectional" Terms

Term/Phrase	Defendants' Construction	Plaintiff's Construction
"bi-directional" / "bidirectional" '811, cl. 1, 2, 6, 7, 18-20 '423, cl. 1, 2, 6 '574, cl. 1, 7, 8 '915, cl. 1, 9	"a pathway that provides for data to flow in two directions between a computer and a facsimile machine to support transmission of scanning and printing signals over the same cable"	No construction necessary

The term that Defendants have submitted for construction is "bi-directional." This is a well-known term of art and needs no further definition or clarification. As framed, there is nothing about the term that mandates the devices that are attached by the bidirectional data flow be particularly identified as that represents unnecessarily overloading the term by an implied context. Defendants' construction is thus overly burdened and narrow insofar as it is limited to particular devices on the end of the signal flow. *See* Levitt Decl., ¶¶100-103.

Moreover, Defendants have required particular data to be transmitted, namely scanning ***and*** printing signals. Nothing about the term "bi-directional" itself requires transmission of particular types of data. Again, these added limitations should be rejected.

Finally, Defendants would add a "same cable" limitation that is not present in the claims. There is no cable requirement in the claims—there is only the requirement of a "connection," whatever form that may take. Consider claim 1 of the '811 patent, which recites in relevant part:

> said computer being equipped with send/receive driver communications software enabling the reception of scanned image signals from the facsimile machine, said transmitted digital facsimile signals being received directly into the computer ***through the bi-directional direct connection via the passive link***…

'811 patent, claim 1 (emphasis added).

The doctrine of claim differentiation also weighs against Defendants' requirement of a single cable. For example, claims 13 and 14 of the '811 patent claim transmitting both scanning and printing data through the bi-directional direct connection, whether that be serial or parallel. Claim 12 must then not be so limited. *See Nazomi Commc'ns, Inc. v. Arm Holdings, PLC*., 403 F.3d 1364, 1370 (Fed. Cir. 2005) ("[C]laim differentiation normally means that limitations stated in dependent claims are not to be read into the independent claim from which they depend."); *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006).

In an apparent effort to justify diverging from the plain and ordinary meaning of the term, Defendants cite a passage from the prosecution history. *See* Opening Brief at 47. The passage they cite argues against the Simon reference, and notes that "SIMON is limited to providing only analog print signal transfers." Defendants' Exhibit 36 at 15, which is the fundamental distinction drawn. The full discussion is set forth below:

> **Applicant's comment**: It is agreed Simon uses an analog connection to provide a print capability between a PC and a Facsimile (FK), when isolated from the public telephone network. However, Simon is limited to providing analog data transmission in one direction only, that is, from the PC to the facsimile for printing. Whereas, the Applicant's invention enables a bi-directional direct communication link between the PC and the facsimile machine for both print and scanning signals. The Applicant has therefore

provided a significant improvement over Simon and the prior art. This improvement was neither obvious nor anticipated by Simon, or the referenced prior art.

The Applicant's invention enables a single a RS 232, or parallel cable connector to transfer **scanning and printing of** digital data signals over the same connection between a PC and a facsimile machine. Simon references FIG 2, which shows a **print only** capability between a PC and a FAX using parallel port connections, and a **scanner only** capability between a fax and a PC using an RS 232 serial connection.

Simon used only TAE – NFN analog port connectors which cannot transfer RS 232 or parallel digital data signals. Therefore, SIMON is limited to providing only analog print signal transfers.

Defendants' Exhibit 36 at 14-15 (emphasis added). Thus, the claimed point that Defendants argue is limiting, that a single connector is used, is "enabled" by the invention, not required. The differentiation from SIMON is based on its being limited to providing only analog print signal transfers.

"[I]n order for prosecution disclaimer to attach, the disavowal must be both clear and unmistakable." *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1325 (Fed. Cir. 2013). "Where the alleged disavowal is ambiguous, or even 'amenable to multiple reasonable interpretations,' we have declined to find prosecution disclaimer." *Avid Tech., Inc. v. Harmonic, Inc.*, 812 F.3d 1040, 1045 (Fed. Cir. 2016) (*quoting Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d 1352, 1359 (Fed. Cir. 2003) and citing *Omega Eng'g*, 334 F.3d at 1325 ("[W]e have thus consistently rejected prosecution statements too vague or ambiguous to qualify as a disavowal of claim scope."). "The party seeking to invoke prosecution history disclaimer bears the burden of proving the existence of a 'clear and unmistakable' disclaimer that would have been evident to one skilled in the art." *Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1063–64 (Fed. Cir. 2016);

Massachusetts Institute of Technology v. Shire Pharmaceuticals, Inc., 839 F.3d 1111, 1118 (Fed. Cir. 2016).

There is no surrender here, and Defendants have failed to carry the heavy burden to so demonstrate. Defendants' effort to add a physical configuration requirement—namely, a cable—should thus be rejected.

V. ALLEGEDLY FUNCTIONAL LIMITATIONS

Defendants urge the erroneous position that each of the following three phrases is subject to Section 112, paragraph 6. They are incorrect. In their Opening Brief at page 50, Defendants concede that these phrases do not use the term "means" or "step," and therefore are subject to a presumption that Section 112, paragraph 6 does not apply.

A claim term is functional when it recites a feature "by what it does rather than by what it is" (e.g., as evidenced by its specific structure or specific ingredients). *In re Swinehart*, 439 F.2d 210, 212 (CCPA 1971). Section 112, paragraph 6 only applies to purely functional limitations. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1311, 75 USPQ2d 1321, 1324 (Fed. Cir. 2005) (en banc) ("Means-plus-function claiming applies only to purely functional limitations that do not provide the structure that performs the recited function."). Claiming often involves the recitation of some step or structure followed by its function, and are not subject to Section 112, paragraph 6. For example, in *In re Schreiber*, the claims were directed to a conical spout (the structure) that "allow[ed] several kernels of popped popcorn to pass through at the same time" (the function). *In re Schreiber*, 128 F.3d 1473, 1478 (Fed. Cir. 1997). As noted by the court in Schreiber, "[a] patent applicant is free to recite features of an apparatus either structurally or functionally." *Id.*

There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper. *Id*. In fact, 35 U.S.C. 112(f) and pre-AIA 35 U.S.C. 112, sixth paragraph, expressly authorize a form of functional

claiming (means- (or step-) plus- function claim limitations discussed in MPEP § 2181 et seq.). Functional language may also be employed to limit the claims without using the means-plus-function format. *See, e.g., K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1363 (Fed. Cir. 1999).

A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. A functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step. In *Innova/Pure Water Inc. v. Safari Water Filtration Sys. Inc.*, 381 F.3d 1111, 1117-20 (Fed. Cir. 2004), the court noted that the claim term "operatively connected" is "a general descriptive claim term frequently used in patent drafting to reflect a functional relationship between claimed components," that is, the term "means the claimed components must be connected in a way to perform a designated function." "In the absence of modifiers, general descriptive terms are typically construed as having their full meaning." *Id.* at 1118. In the patent claim at issue, "subject to any clear and unmistakable disavowal of claim scope, the term 'operatively connected' takes the full breath of its ordinary meaning, i.e., 'said tube [is] operatively connected to said cap' when the tube and cap are arranged in a manner capable of performing the function of filtering." *Id*. at 1120, 72 USPQ2d at 1008.

Other examples of permissible function are instructive. It was held that the limitation used to define a radical on a chemical compound as "incapable of forming a dye with said oxidizing developing agent" although functional, was proper because it set definite boundaries on the patent protection sought. *In re Barr*, 444 F.2d 588, 170 USPQ 330 (CCPA 1971). In a claim that was directed to a kit of component parts capable of being assembled, the court held that limitations such as "members adapted to be positioned" and "portions... being resiliently dilatable whereby

said housing may be slidably positioned" serve to precisely define present structural attributes of interrelated component parts of the claimed assembly. *In re Venezia*, 530 F.2d 956, 189 USPQ 149 (CCPA 1976).

As set forth above, the Patents-in-Suit have been repeatedly examined by the USPTO—both originally and in reexamination—and further examined by the Board, the highest-level administrative body charged with reviewing patents in the United States. At no time did any of those bodies treat these claim terms as subject to Section 112, paragraph 6, or find them in any way indefinite. The PTO's findings during reexamination are "evidence the court must consider in determining whether the party asserting invalidity has met its statutory burden by clear and convincing evidence." *Fromson*, 755 F.2d at 1555.

Infinity is confident in its view that none of these terms are properly subject to Section 112, paragraph 6. None uses the word "means" "or step," and all are thus subject to a presumption that Section 112, paragraph 6 does not apply. Defendants have failed to overcome that presumption. If for some reason, however, the Court disagrees, Infinity requests an opportunity to provide further briefing about the corresponding structure in the specification, which is adequate in any case, before any determination of invalidity under Section 112, which is tantamount to a dispositive motion. This request is also in light of the oversights and misunderstandings within the Randolph Declaration regarding the corresponding structure in the specification as set forth in the Levitt Declaration. In any case, exemplary teaching relating to these issues is set forth in the Levitt Declaration, paragraphs 112-124.

K. **"activating" claim terms**

With respect to the next three terms, Defendants seek to apply Section 112, paragraph 6 to method steps that are readily understood by persons of skill in the art. The words "means" and

"step" are not used in the claims, giving rise to a presumption that Section 112, paragraph 6 does not apply.

Defendants apparently concede that there is a presumption against application of Section 112, paragraph 6. In order to overcome this presumption, Defendants argue that "activating," "conditioning" and "arranging" are meaningless "nonce" words, that have no meaning to a person of ordinary skill in the art. They are incorrect.

"Activating" is a term that would be understood to mean put in an active state, depending on the context of the claim. It has been repeatedly construed in this manner by a host of courts in patent cases. Contrary to the assertion of Defendants, the term "activating" is not a nonce word. It has a readily ascertainable meaning known to a person of ordinary skill in the art in the context of this invention. Levitt Decl., ¶104-106. The following chart shows that "activating" has been construed repeatedly in other cases outside the scope of Section 112, paragraph 6.

Phrase	Construction	Citation
"activating"	"starting the operation or turning on"	*Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002)
"activates the call pod"	"powers on the call pod"	*Callpod, Inc. v. GN Netcom, Inc., et al.*, 2009 U.S. Dist. LEXIS 51103 (N.D. Ill., Mar. 6, 2009)
"automatically activate"	"to automatically power on the call pod during a call"	*Callpod, Inc. v. GN Netcom, Inc., et al.*, 2009 U.S. Dist. LEXIS 51103 (N.D. Ill., Mar. 6, 2009)
"automatically deactivate"	"to automatically power off the call pod upon the termination of the call."	*Callpod, Inc. v. GN Netcom, Inc., et al.*, 2009 U.S. Dist. LEXIS 51103 (N.D. Ill., Mar. 6, 2009)

"activating"	"setting in motion."	*Bed-Check Corp. v. Ultimate Safety, Inc*., 2003 U.S. Dist. LEXIS 27845 (N.D. Okla., Nov. 24, 2003)

In the *Texas Digital* matter, the Federal Circuit cogently observed "there is nothing in the record to suggest that 'activating' means other than what its dictionary definition would suggest, i.e., starting the operation or turning on." *Texas Digital Systems, Inc. v. Telegenix, Inc*., 308 F.3d 1193 (Fed. Cir. 2002).

By way of contrast, the cases cited in FN19 on page 51 of Defendants' Opening Brief use the phrase "module" or "mechanism," known nonce words, in lieu of "means." Defendants have not cited a single case where "activating" has been held to be a nonce word.

In other words, here there is specific action disclosed for performing the function. ("Sufficient structure exists when the claim language specifies the exact structure that performs the function in question without need to resort to other portions of the specification or extrinsic evidence for an adequate understanding of the structure."); *TriMed, Inc. v. Stryker Corp.*, 514 F.3d 1256, 1259-60, 85 USPQ2d 1787, 1789 (Fed. Cir. 2008); *see also Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1376, 65 USPQ2d 1865, 1874 (Fed. Cir. 2003).

> But the *Nautilus* standard of "reasonable certainty" does not exclude claim language that identifies a product by what it does. Nothing inherent in the standard of "reasonable certainty" precludes a relevant skilled artisan from understanding with reasonable certainty what compositions perform a particular function. Not surprisingly, we have long held that nothing in the law precludes, for indefiniteness, "defining a particular claim term by its function." *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1374–75 (Fed. Cir. 2014); *see Cox Commc'ns, Inc. v. Sprint Commc'n Co. LP*, 838 F.3d 1224, 1232 (Fed. Cir. 2016) (explaining that claims "are not per se indefinite merely because they contain functional language"), *cert. denied*, —— U.S. ——, 137 S.Ct. 2267 (2017); *Microprocessor Enhancement Corp. v. Tex. Instruments Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008) (explaining that "apparatus claims are not necessarily indefinite for using functional language"); *In re Swinehart*, 439 F.2d 210, 212 (CCPA 1971) (ruling that "there is nothing intrinsically wrong with the use of such a technique in drafting patent claims").

> What is needed is a context-specific inquiry into whether particular functional language actually provides the required reasonable certainty.

BASF Corp. v. Johnson Matthey Inc., 875 F.3d 1360, 1366 (Fed. Cir. 2017).

An instructive case is the Federal Circuit's recent ruling in *Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1008 (Fed. Cir. 2018), in which the district court was reversed for treating the words "program" and "user interface code" as nonce words.

> By taking that approach, the district court effectively treated "program" and "user interface code" as nonce words, which can operate as substitutes for "means" and presumptively bring the disputed claims limitations within the ambit of § 112, ¶ 6. ***That is erroneous for at least three related reasons***. ***First, the mere fact that the disputed limitations incorporate functional language does not automatically convert the words into means for performing such functions***. *See Greenberg*, 91 F.3d at 1583 ("Many devices take their names from the functions they perform. The examples are innumerable, such as 'filter,' 'brake,' 'clamp,' 'screwdriver,' or 'lock.' "). ***Second, the court's analysis removed the terms from their context, which otherwise strongly suggests the plain and ordinary meaning of the terms***. Claims 2 and 52 of the '691 patent, for example, recite "[a] graphical user interface," which their preambles make clear, may comprise "an update of an *existing* program" using a two-step method. *See, e.g.*, '691 patent, col. 81 ll. 6–28 (emphasis added).

Zeroclick, LLC v. Apple Inc., 891 F.3d 1003, 1008 (Fed. Cir. 2018).

A person of ordinary skill would understand that "activating" has a meaning in the context of the claims. *See also* Levitt Decl., ¶¶104 *et seq.*

L. "conditioning" claim terms

Similarly to activating, "conditioning" is not subject to Section 112, paragraph 6. It too has a meaning to a person of ordinary skill in the art, namely bringing into the desired state – so putting into the send/receive mode. Levitt Decl., ¶¶107-08. One such way that is taught in the patent specification is the use of RS232 digital serial communications. "Conditioning" has known meaning to a person of ordinary skill in the art, and does not give rise to the application of Section 112, paragraph 6. *See Zeroclick,*, 891 F.3d at 1008.

Defendants seem to assert that the inclusion of functional language in a claim renders it subject to Section 112, paragraph 6, and/or renders it indefinite. They are incorrect in that assertion.

> Cox nevertheless contends that "processing system" is indefinite because the asserted claims only describe it in functional terms. We disagree. Claims are not per se indefinite merely because they contain functional language.[4] *See also Microprocessor Enhancement Corp. v. Tex. Instruments Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008) (citing *Halliburton Energy Servs., Inc. v. M–I LLC*, 514 F.3d 1244, 1255 (Fed. Cir. 2008)) ("[A]pparatus claims are not necessarily indefinite for using functional language"). Indeed, here, functional language promotes definiteness because it helps bound the scope of the claims by specifying the operations that the "processing system" must undertake. All of the asserted claims are method claims, so it makes sense to define the inventive method as a series of functions.

Cox Commc'ns, Inc. v. Sprint Commc'n Co. LP, 838 F.3d 1224, 1232 (Fed. Cir. 2016), *cert. denied*, 137 S.Ct. 2267 (2017).

M. **"arranging" claim terms**

Arranging is also not a nonce word, and is not subject to Section 112, paragraph 6. It means organizing in a particular order or configuration. *See* Levitt Decl., ¶¶109-110. Indeed, the meaning of "arranging" is so well known that it is hard to understand how Defendants can muster a serious position that it is a nonce word, or lacks meaning, or otherwise rebuts the presumption that Section 112, ¶6 does not apply.

For example, a district court has previously construed "arranged about" as not subject to Section 112, paragraph 6, and meaning "placed or set in a specific order." *911EP v. Whelen Engineering Co., Inc.*, 512 F. Supp.2d 713 (E.D. Tex., March 23, 2007). In another case involving some functional language, "arranged" was not subject to Section 112, paragraph 6 treatment. In that case, "the heater is constructed and arranged to add heat to the fluid while the fluid is disposed within the tank" was construed to mean "the heater warms the cleaning fluid while the cleaning

fluid is in the tank." *ChemFree Corp. v. J. Walter, Inc., et al.*, Civil Case No. 1:04-CV-3711-JTC, 2007 WL 2071536 (N.D. Ga., July 17, 2007).

As set forth in greater detail above, the digital communications teachings throughout the specification are many that should be understood as relevant to these terms are many. For example, RS-232 is a digital serial communication technology that is repeatedly discussed throughout the specification and shown in the drawings. *See, e.g.*, '811 patent, Figs. 2e, 2g; *see also, e.g.*, '811 patent, 6:38-40; 6:51-54; 8:7-13; claim 8. Levitt Decl., ¶¶109-110.

VI. EVIDENCE OF RECORD

While Infinity has attempted to focus its discussion above on a large number of unwieldy terms identified for construction by Defendants, it reserves the right to rely on all of the intrinsic and extrinsic evidence of record in the parties' Joint Claim Construction and Prehearing Statement (Dkt. 108), Defendants' Opening Claim Construction Brief and exhibits (Dkt. 111-113), this Responsive Claim Construction Brief and exhibits, including the Levitt Declaration, Defendants' Reply Claim Construction Brief and tutorials submitted. In addition, notwithstanding that neither party bears the burden on issues of claim construction, Defendants have been provided an additional briefing opportunity on these matters. Infinity reserves the right to file a surreply brief with additional intrinsic and extrinsic evidence relating to this matter, and/or to present that information at the hearing on these issues.

VII. CONCLUSION

For the foregoing reasons, in view of the patent specifications, drawings, prosecution histories and claims, and the extrinsic evidence of record in this brief and the Joint Claim Construction Statement, Infinity submits that its claim constructions should be adopted.

DATED: September 28, 2018

Respectfully submitted,

/s/ Andrew G. DiNovo

Russell M. Soloway
RUSSELL M. SOLOWAY, P.C.
LTW – Suite 215
40 E. Montgomery Ave.
Ardmore, PA 19003
Telephone: 210-859-5272
Email: russell@solowaylaw.com

Andrew G. DiNovo (*pro hac vice*)
Nicole E. Glauser (*pro hac vice*)
Gabriel R. Gervey (*pro hac vice*)
Daniel Schmid (*pro hac vice pending*)
DINOVO PRICE LLP
7000 N. MoPac Expressway, Suite 350
Austin, TX 78731
Telephone: 512-539-2626
Facsimile: 512-539-2627
Email: adinovo@dinovoprice.com
Email: ggervey@dinovoprice.com
Email: nglauser@dinovoprice.com
Email: dschmid@dinovoprice.com

Counsel for Plaintiff,
Infinity Computer Products, Inc.

CERTIFICATE OF SERVICE

I hereby certify that the foregoing was filed on this September 28, 2018, using the electronic case filing (CM/ECF) for the U.S. District Court for the Eastern District of Pennsylvania, which will send notification of such filing to all counsel of record.

/s/ Andrew G. DiNovo
Andrew G. DiNovo